Space News ROUNDUP!

VOL. 36 NO. 29 | Lyndon B. Johnson Space Center, Houston, Texas | November 21, 1997

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U.S., Russia name first station crews

The first four crews to live and work on board the International Space Station were named this week by both the U.S. and Russian space agencies.

"This is a historic step in the evolution of the International Space Station," said Randy Brinkley, manager of the International Space Station. "These assignments are a clear indication of the maturity of the space station and the exciting reality that the ISS will soon be operational."

The first-increment crew consists of American Astronaut William Shepherd, a U.S. Navy captain, the expedition commander; Yuri Gidzenko, a Russian Air Force colonel and the Soyuz vehicle commander; and cosmonaut Sergei Krikalev, flight engineer. All three have previous space flight experience and are training for an early 1999 Soyuz launch and a five-month mission.

Shepherd, Gidzenko and Krikalev will be relieved in the summer of 1999, when the second incremental crew is scheduled to arrive aboard Space Shuttle *Atlantis*. That crew will be commanded by Russian Cosmonaut Yuri Usachev. He will be joined by American Astronauts James Voss, an Army colonel, and Susan Helms, an Air Force lieutenant colonel. All three also have flown in space before.

The third crew to inhabit the International Space Station will begin a two-month mission launching aboard a Soyuz spacecraft in late 1999. That crew will be commanded by American Astronaut Kenneth Bowersox, a Navy commander. Russian cosmonauts Vladimir Dezhurov, a lieutenant colonel in the Russian Air Force and the Soyuz vehicle commander, and Mikhail Turin, the flight engineer, will join Bowersox to complete the crew. Bowersox and Dezhurov have prior space flight experience while Turin will be making his first flight into space. To provide maximum flexibility in schedule and training, this crew also will train as backup for the first resident space station crew of Shepherd, Gidzenko and Krikalev.

The fourth resident crew will be commanded by Russian cosmonaut Yuri Onufrienko, a Russian Air Force colonel. Onufrienko will be joined on this four-month mission by astronauts Carl Walz, a U.S. Air Force lieutenant colonel, and Daniel Bursch, a U.S. Navy commander. All three have previously flown in space. They currently are scheduled to arrive at the station onboard shuttle *Discovery* early in the year 2000 and will return to Earth on a Soyuz vehicle. They will train as the backup crew for Usachev, Voss and Helms.

The crews will continue the on-orbit construction of the space station through a series of scheduled space walks, test station hardware, conduct maintenance and develop ISS science capabilities.

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BUSY SUMMER, FALL SHOWCASE OUTSTANDING WORK

Dear Fellow Employees:

We've had a very busy summer and fall here at JSC, and with the holidays coming up this is a good opportunity to for me to tell everyone what an outstanding job they've been doing.

There have been a lot of activities competing for our attention. We've helped our Russian friends recover from a highly publicized space collision and maintained our continuing presence aboard Mir. We've just completed a much applauded JSC Open House and Inspection 97. We've made great progress in building the first hardware for the International Space Station. We've posted one of the safest quarters on record. And we're waiting on the results of an independent audit that will tell us whether we've achieved ISO 9000 certification.

We still have a lot projects to keep our eyes on during the holiday period. We're supporting the eighth shuttle mission of the year—a long one—and we're getting ready to send our final astronaut to Mir. We're in the middle of a 90-day chamber test of life support systems in Bldg. 7. And we're only eight months away from the launch of the first International Space Station element.

The upcoming holiday season should provide all our employees a time to enjoy their families and friends as well as a time to reflect on a year of activities well done. And a time to look ahead to the opportunities and challenges we face.

This is a great team, we're doing great things and judging by the remarks I heard during Open House and Inspection 97, there are a lot of people out there who appreciate your dedication and hard work.

Sincerely,

George W. S. Abbey

George W. S. Abbey
Director

Microgravity research calls for STS-87

By Ed Campion

Assuming final countdown and launch activities went as planned earlier this week, the Space Shuttle *Columbia* and its six-person crew should now be busy with preparations for capturing a satellite and conducting a space walk.

STS-87 Commander Kevin Kregel and his crew—Pilot Steve Lindsey, Mission Specialists Kalpana Chawla, Winston Scott and Takao Doi along with Payload Specialist Leonid Kadenyuk—were scheduled to blast off from Launch Pad 39B on Wednesday afternoon on a 16-day mission to study how the weightless environment of space affects various physical processes, make observations of the Sun's outer atmospheric layers and conduct a space walk to rehearse future space station operations.

Columbia's eight and a half minute climb to orbit this week was to include its own "first" with a second roll maneuver to a "heads up" position about six minutes into the flight. The "heads up" position allowed *Columbia* to acquire communications with the Tracking Data Relay Satellite System and removed the need for Bermuda tracking station support which in turn provided a cost savings to the space agency.

After reaching orbit Wednesday afternoon, the mission timeline called for the crew to immediately begin activating the various United States Microgravity Payload-4 experiments and equipment that are the primary focus of the STS-87 flight and are designed to help researchers gain additional understanding of the

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Young JSC physician earns president's early career award

Todd Schlegel, a research physician at JSC, was among 60 young researchers to receive the second annual Presidential Early Career Award for Scientists and Engineers this month at the White House.

This is the highest honor bestowed by the U.S. on outstanding scientists and engineers at the beginning of their careers. The awards were established by President Clinton in February 1996 to recognize young scholars, their research contributions, their promise, and their commitment to broader societal goals.

Ten government agencies join together annually to nominate promising scientists and engineers for the awards. Those selected receive up to $500,000 over five years to further their research.

"What my team and I are doing is looking at relationships between changes in the function of the inner ear and changes in the function of the cardiovascular system during and after exposure to altered gravitational environments," said Schlegel, who works in JSC's Life Science Research Laboratories Branch.

"We're looking at these relationships because when astronauts return from space, they can sometimes experience, simultaneously, problems such as motion sickness, postural imbalance and orthostatic intolerance, or fainting after standing up," Schlegel said.

Historically, post-flight motion sickness and imbalance have been attributed to inner ear changes, but orthostatic intolerance has been attributed to headward fluid shifting and cardiovascular deconditioning. The work by Schlegel and his team looks at whether the inner ear changes lead to or exacerbate changes in blood pressure and heart rate upon return to Earth. The team is studying test subjects during and after parabolic flight and centrifugation.

Schlegel

"I am extremely honored to receive this unexpected reward, and also humbled, knowing how much teamwork goes into performing this type of interdisciplinary research," he said.

JSC observes National Native American Month

November is National Native American Month, and JSC will celebrate with Eagle Wind Dancers and exhibits of American Indian culture on Tuesday, Nov. 25.

The observance recognizes and honors the vital role that American Indians have played and continue to play in the life of our country.

The Equal Opportunity Programs Office invites all JSC employees to participate from 9 a.m.-1 p.m. Nov. 25 in the Bldg. 3 Cafeteria.

Native American dancers representing several tribes, in full regalia, will perform a variety of American Indian dances from 11 a.m.-noon. The observance also will include an exhibit full of various American Indian artifacts, photographs, and artwork.